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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SAFAIPOUR, HOUSHANG

ART UNIT PAPER NUMBER

2622

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/072,742

Applicant(s)

HANSEN ET AL.

Examiner

Houshang Safaipoor

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-20 is/are rejected.
- 7)  Claim(s) \_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:
1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

Applicant's amendment filed on June 25, 2004 has been entered and made of record.

The recitation "printing press" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Applicant argues that Darel et al. does not teach or suggest a camera assembly having image processing hardware positioned within the same housing as the image sensor. Applicant refers to "Brief Description of the Drawings" that describes fig. 1 as a high level block diagram of a color control system 10 and fig. 2 as the high level block diagram integrated into printing press 22. He concludes that the grouping of components does not mean that the image processing hardware is positioned within the same housing as the image sensor. He further refers to fig. 3 as a support for his interpretation. Examiner disagrees. Fig. 3 illustrates a portion of image acquisition unit as indicated in "Brief Description of the Drawings". The description for fig. 3 reads "a side sectional view schematic diagram illustrating the optical and illumination portion of the image acquisition unit". Therefore, it is the examiner's judgment that the single hatched rectangle 10, in fig. 1, indicates that the camera assembly and image processing hardware are positioned within the same housing. Therefore examiner maintains his rejection.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 6, 9, 11, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Darel et al. (U.S. Patent No. 6,024,018)

Regarding claim 1, Darel et al. discloses a camera assembly of a printing press comprising:

a housing; an image sensor positioned within said housing and adapted to acquire images of a moving substrate of a printing press; a light source positioned within said housing; an optics assembly positioned within said housing; a microprocessor positioned within said housing; and image processing hardware positioned within said housing and adapted to analyze the acquired images of the substrate (figs. 1, 2 and 3, columns 5 and 6 through col. 7, line 23 and col. 14, line 41 through col. 15 line 16) . ).

Regarding claim 2, Darel et al. discloses the camera assembly of claim 1 wherein said image sensor is a CCD scanner (col. 6, lines 5-20).

Regarding claim 5, Darel et al. discloses the camera assembly of claim 1 wherein said optics assembly include a lens (fig. 3).

Regarding claim 6, Darel et al. discloses the camera assembly of claim 5 wherein said optics assembly includes at least one mirror (fig. 3).

Regarding claim 9, Darel et al. discloses the camera assembly of claim 1 and further including a communication interface (col. 4, lines 8-36).

Regarding claims 11 and 18, arguments analogous to those presented for claim 1 are applicable to claims 11 and 18.

Regarding claim 19, Darel et al. discloses the camera assembly of claim 18 wherein said housing has a width dimension of no more than four inches (fig. 2).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 7, 8, 10, 12, 13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darel et al. (U.S. Patent No. 6,024,018).

Regarding claim 3, Darel et al. does not explicitly disclose a camera assembly of claim 1 wherein said image sensor is an area scanner. The use of area scanner is well known and routinely implemented in scanning art as admitted by the applicant (Page 6, line 3). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the use of area scanner in Darel's system.

Regarding claim 7, Darel et al. does not explicitly disclose the camera assembly of claim 1 wherein said image processing hardware includes at least one FPGA. The use of FPGA is well known and routinely implemented in scanning art (Official Notice). Therefore it would

have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the use of FPGA in Darel's system .

Regarding claim 8, although Darel et al. does not explicitly disclose the camera assembly of claim 1 and further including a power supply, power supply is the essential part of the assembly to provide power to the different instruments.

Regarding claims 10 and 15, arguments analogous to those presented for claims 1 and 7 are applicable to claims 10 and 15.

Regarding claims 12 and 13, arguments analogous to those presented for claims 1, 2 and 7 are applicable to claims 12 and 13.

Regarding claim 20, Darel et al. does not explicitly disclose a camera assembly to include at least one rib. Enclosures with ribs are well known and routinely implemented in scanning art (Official Notice). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include ribs in the enclosure assembly of Darel's apparatus to improve heat dissipation.

Claims 4, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darel et al. (U.S. Patent No. 6,024,018) and further in view of Sikes et al. (U.S. Patent No. 5,018,213).

Regarding claim 4, Darel et al. does not explicitly disclose the camera assembly of claim 1 wherein said light source is a strobe type light. Sikes et al. discloses such an apparatus (col. 3, lines 14-42). Therefore it would have been obvious to a person of an ordinary skill in the art at

the time the invention was made to include conventional strobe light source in Darel's apparatus to stop the motion of the moving web for inspection purposes.

Regarding claim 14, Darel et al. discloses a camera assembly comprising:

a housing; a camera positioned within said housing for acquiring images of the substrate;

a light source positioned within said housing; an optics assembly positioned within said housing (please refer to claim 1); and

Darel et al. discloses image processing hardware positioned within said housing for processing the acquired images (please refer to claim 1), however, does not explicitly disclose determining any color register error. Sikes et al. introduces such an apparatus (col. 4, line 59, through col. 5, line 20). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include automatic register control of Sikes in Darel's apparatus to adjust the web printing.

Regarding claims 16 and 17, arguments analogous to those presented for claim 14 is applicable to claims 16 and 17.

By further reviewing the Sike's reference, examiner has come to the conclusion that Sikes device, as illustrated in fig. 1A, also discloses that the camera assembly and the image processing hardware are positioned together in the same web printing apparatus (col. 4, lines 1-35).

Therefore, the examiner maintains his rejection issued under the first office action as follow:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2622

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, 9, 11, 14 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Sikes (U.S. Patent No. 5,018,213)

Regarding claim 1, Sikes discloses a camera assembly of a printing press comprising:

a housing (fig. 1A);

an image sensor positioned within said housing and adapted to acquire images of a moving substrate of a printing press (col. 1, lines 52-68);

a light source positioned within said housing (col. 3, lines 14-58);

an optics assembly positioned within said housing (col. 3, lines 14-58);

a microprocessor positioned within said housing (col. 3, line 59 through col. 4, line35);

and

image processing hardware positioned within said housing and adapted to analyze the acquired images of the substrate (col. 3, line 59 through col. 4, line35).

Regarding claim 2, Sikes discloses the camera assembly of claim 1 wherein said image sensor is a CCD scanner (col. 1, lines 52-68).

Regarding claim 4, Sikes discloses the camera assembly of claim 1 wherein said light source is a strobe type light (col. 3, lines 14-42).

Regarding claim 8, Sikes discloses the camera assembly of claim 1 and further including a power supply (fig. 3).

Regarding claim 9, Sikes discloses the camera assembly of claim 1 and further including a communication interface (col. 3, line 59 through col. 4, line35).



Regarding claim 11, arguments analogous to those presented for claim 1 are applicable to claim 11.

Regarding claim 14, Sikes discloses a camera assembly for use in scanning a paper substrate of a printing press and determining color register error, said assembly comprising:

a housing (fig. 1A);

a camera positioned within said housing for acquiring images of the substrate (fig. 3A, camera 116);

a light source positioned within said housing (fig. 3A);

an optics assembly positioned within said housing (col. 3, lines 14-58); and

image processing hardware positioned within said housing for processing the acquired images and determining any color register error (col. 3, line 59, through col. 5, line 20).

Regarding claim 16, Sikes discloses a method of determining color register error on a printing press, said method comprising:

providing a camera assembly having mounted therein a scanner and image processing hardware for acquiring an image of a paper substrate of a printing press (fig. 3A, camera 116);

processing the image with the image processing hardware to determine any color register error (col. 3, line 59, through col. 5, line 20); and

transferring the color register error information externally of the camera assembly (col. 3, line 59, through col. 5, line 20).

Regarding claim 17, Sikes discloses a method of determining color register error of a printing press, said method comprising:

scanning a paper substrate at a desired location with a camera assembly having mounted,

within a housing, a scanner and image processing hardware to obtain an image (fig. 3A, camera 116);

processing the image with the image processing hardware to determine a color register error (col. 3, line 59, through col. 5, line 20); and

transferring the error information externally of the camera assembly to effect color registration of the printing press (col. 3, line 59, through col. 5, line 20).

Regarding claim 18, Sikes discloses a camera assembly for use in scanning a paper substrate of a printing press, obtaining an image, and processing the image all within the assembly, the printing press having a side frame and the paper substrate have an extremity, said assembly comprising:

a housing dimensioned so that said housing is mountable at the extremity of the paper substrate without interference from the side frame of the printing press (figs. 1A and 1B);

a camera positioned within said housing (fig. 3, camera 116);

a light source positioned within said housing (fig. 3, light source 112);

an optics assembly positioned within said housing (col. 3, lines 14-58); and

image processing hardware positioned within said housing (col. 3, line 59 through col. 4, line 35).

Regarding claim 19, Sikes discloses the camera assembly of claim 18 wherein said housing has a width dimension of no more than four inches (fig. 3).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 6, 7, 10, 12, 13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sikes (U.S. Patent No. 5,018,213) and further in view of Miyauchi et al. (U.S. Patent No. 6,456,733).

Regarding claim 3, Neither Sikes nor Miyauchi et al. discloses a camera assembly of claim 1 wherein said image sensor is an area scanner. The use of area scanner is well known and routinely implemented in scanning art as admitted by the applicant (Page 6, line 3). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the use of area scanner in combination of Sikes and Miyauchi .

Regarding claim 5, Sikes does not explicitly disclose the camera assembly of claim 1 wherein said optics assembly include a lens. Miyauchi et al. discloses such a device (fig. 4). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to combine Miyauchi's device with that of Sikes in order to apply the light uniformly to the surface of the paper web.

Regarding claim 6, Sikes does not explicitly disclose the camera assembly of claim 5 wherein said optics assembly includes at least one mirror. Miyauchi et al. discloses such a device (fig. 4, mirror 23). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to combine Miyauchi's device with that of Sikes in order

to apply the light uniformly to the surface of the paper web.

Regarding claim 7, Neither Sikes nor Miyauchi et al. discloses the camera assembly of claim 1 wherein said image processing hardware includes at least one FPGA. The use of FPGA is well known and routinely implemented in scanning art (Official Notice). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the use of FPGA in combination of Sikes and Miyauchi .

Regarding claims 10 and 15, arguments analogous to those presented for claims 1 and 7 are applicable to claims 10 and 15.

Regarding claims 12 and 13, arguments analogous to those presented for claims 1, 2 and 7 are applicable to claims 12 and 13.

Regarding claim 20, Sikes does not explicitly disclose a camera assembly to include at least one rib. Enclosures with ribs are well known and routinely implemented in scanning art (Official Notice). Therefore it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include ribs in the enclosure assembly of Sikes apparatus to improve heat dissipation.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Houshang Safaipour whose telephone number is (703)306-4037. The examiner can normally be reached on Mon.-Thurs. from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles, Sr. can be reached on (703)305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Houshang Safaipour  
Patent Examiner  
Art Unit 2622  
March 15, 2004

  
EDWARD COLES  
SUPERVISOR